

Amendments to the Specification and Abstract

In the Specification:

Before paragraph [0002] please insert the heading --BACKGROUND--.

Please replace paragraph [0002] with the following rewritten paragraph:

[0002] A device ~~of this generic type~~ for the spectral selection and detection of the spectral regions of a light beam is known from German patent application DE 43 30 347 A1. This ~~prior-art~~ device endeavored to carry out the selection and the detection of the different spectral regions simultaneously and at high yields. In reference to Claim 5 of that specification, several spectral regions are associated in a cascade with blocking and reflecting means as well as detectors, so that each blocking spectral region is detected and each reflected spectral region is once again blocked, if applicable, and likewise detected.

Before paragraph [0004] please insert the heading
--SUMMARY OF THE INVENTION--.

Please replace paragraph [0004] with the following rewritten paragraph:

[0004] ~~The present invention is thus based on the objective of configuring and refining~~ It is thus an object of the present invention to provide a device for the spectral selection and detection of the spectral regions of a light beam ~~in such a way that it~~ that can be used universally, regardless of the concretely required detection method. A simple design, along with a reliable selection and detection of different spectral regions, ~~should be attained~~ is desirable.

Please replace paragraph [0005] with the following rewritten paragraph:

[0005] ~~The device according to the invention for the spectral selection and detection of the spectral regions of a light beam achieves the above mentioned objective through the features of Claim 1~~ present invention provides a device for the spectral selection and detection of the

spectral regions of a light beam, said selection unit comprising means for spectrally splitting the light beam, and means for blocking a spectral region and reflecting at least part of the unblocked spectral region, said detection unit comprising detectors which are arranged in the beam path of the blocked spectral region and in the beam path of the reflected spectral region. According to ~~this claim~~ the present invention, detectors that have different designs and different detection properties or detection methods are provided so that it is possible to activate – via the specifically reflected or blocked beam path – precisely those detectors whose detection possibilities are needed for the concrete application. In other words, detectors that have different designs are provided in the individual selection branches and said detectors can be actuated with or exposed to the spectral region needed in each case.

Please replace paragraph [0006] with the following rewritten paragraph:

[0006] ~~In a very advantageous manner~~ Advantageously, several means for blocking and reflecting spectral regions as well as detectors are arranged in a cascade so that the blocked or reflected spectral region is detected and the blocked or reflected spectral region is once again blocked or reflected and then detected. In the various cascades, detectors that have different designs are provided so that, by actuating the individual detectors, a different detection requirement is met. In any case, it is essential that detectors that have different designs are combined in the device according to the invention, and these can be detectors of any suitable kind.

Please replace paragraph [0009] with the following rewritten paragraph:

[0009] ~~An especially important aspect is the~~ A modular combination of the selection units and of the detection units, namely, their combination into a quasi monolithic module ~~that~~ can be implemented at a suitable place in or on the instrument. Due to the monolithic design, there is no need to do any adjustment work on the selection units on and the detection units since a fixed association of the individual optical modules with respect to each other is prescribed there.

Please replace paragraph [0011] with the following rewritten paragraph:

[0011] If APDs are provided, then it is ~~especiall~~y advantageous to arrange these in the first cascade since – on the basis of the current state of the art – they are the most sensitive detectors in the entire arrangement and since the imaging properties fundamentally deteriorate towards the next cascades. Incidentally, the APDs have no detection surfaces. As already mentioned above, different types of detectors can also be used in different cascades.

Please replace paragraph [0012] with the following rewritten paragraph:

[0012] Normally, the means for blocking and reflecting will be configured in such a way that only one cascade with its appertaining detectors is active at any given point in time. However, by the same token, it is also possible to activate different cascades at the same time – simultaneously – and for this purpose, the means for blocking and reflecting have to be appropriately configured. In an ~~especiall~~y advantageous manner, these means for blocking and reflecting can spectrally split the light beam into predefinable ratios – preferably in a variable manner.

Please replace paragraph [0015] with the following rewritten paragraph:

[0015] An ~~especiall~~y advantageous aspect of using mirror slides lies in the fact that one can switch back and forth between the individual cascades by merely shifting one or more of the mirror slides. This is especially significant when a confocal overview image is to be taken quickly in order to subsequently carry out FCS or lifetime measurements at a certain place in a specimen for which detectors other than photomultipliers are being used.

Please replace paragraph [0021] with the following rewritten paragraph:

[0021] Moreover, it should be noted that very different application possibilities exist for the device according to the invention. An ~~especiall~~y advantageous use is in a scanning microscope, which can preferably be a confocal laser scanning microscope.

Before paragraph [0022], please insert the heading --BRIEF DESCRIPTION OF THE DRAWINGS--.

Please replace paragraph [0022] with the following rewritten paragraph:

[0022] Various possibilities exist to configure and refine the teaching of the present invention in an advantageous manner. For this purpose, ~~on the one hand,~~ reference is made to the ~~claims that are subordinate to Claim 1 and, on the other hand, to the~~ explanation below of embodiments of the teaching according to the invention on the basis of the ~~drawing~~ drawings. Generally preferred embodiments and refinements of the teaching are also explained in conjunction with the explanation of the preferred embodiments of the invention on the basis of the ~~drawing~~ drawings. The ~~drawing shows~~ drawings show the following:

Figure 1 a schematic depiction of a device according to the invention, with cascading detection branches, ~~in the form of a block diagram;~~ and

Figure 2 a schematic depiction of a second embodiment of a device according to the invention in which the detectors of the first cascade are configured as APDs.

Before paragraph [0023], please insert the heading --DETAILED DESCRIPTION--.

Please replace paragraph [0023] with the following rewritten paragraph:

[0023] Figure 1 is a schematic ~~block~~ diagram showing the ~~fundamental~~ basic structure of a device according to the invention. The light beam 1 that is to be spectrally split and then reflected comprises a merely schematically indicated selection unit 2 which, in turn, has means 3 for spectrally splitting the light beam 1. In the first cascade 4, the spectrally split light 5 strikes a set of mirror slides 6, hereinafter referred to as mirror slide 6 for the sake of simplicity. From the

mirror slide 6, via the optical means 7, the light 5 can reach a total of three detectors 8 of the first cascade 4, depending on the position of the mirror slide 6.